

Claims:

1. An isolated I-TRAF polypeptide comprising the amino acid sequence of a polypeptide selected from the group consisting of:

- (a) a native sequence I-TRAF polypeptide,
- 5 (b) a polypeptide having at least about 70% amino acid sequence identity with the TRAF-binding domain of a native sequence I-TRAF polypeptide and capable of inhibiting a TRAF-mediated signaling event, and
- (c) a fragment of a polypeptide of (a) or (b) capable of inhibiting a TRAF-mediated signaling event.

10 2. The polypeptide of claim 1 which has an at least about 60% overall amino acid sequence identity with a native sequence I-TRAF polypeptide.

15 3. The polypeptide of claim 1 which has an at least about 70% overall amino acid sequence identity with a native sequence I-TRAF polypeptide.

4. The polypeptide of claim 1 which has an at least about 80% overall amino acid sequence identity with a native sequence I-TRAF polypeptide.

20 5. The polypeptide of claim 1 which has an at least about 90% overall amino acid sequence identity with a native sequence I-TRAF polypeptide.

25 6. The polypeptide of claim 1, which is a native mammalian I-TRAF or a fragment thereof.

7. The polypeptide of claim 6 which is a native murine I-TRAF or a fragment thereof.

8. The polypeptide of claim 7 comprising amino acids 35 - 236 of SEQ. ID. NO 1.
9. The polypeptide of claim 6 which is a native human I-TRAF or a fragment thereof.
- 5 10. The polypeptide of claim 9 comprising amino acids 1 through 202 of SEQ. ID. NO:
- 5.
11. The polypeptide of claim 9 represented by SEQ. ID. NO: 5.
- 10 12. The polypeptide of claim 9 encoded by a nucleic acid capable of hybridizing under stringent conditions to the complement of SEQ. ID. NO: 6.
13. An isolated nucleic acid molecule encoding a polypeptide of claim 1.
- 15 14. An isolated nucleic acid molecule encoding a polypeptide of claim 9.
15. A vector comprising and capable of expressing, in a suitable host cell, the nucleic acid molecule of claim 13.
- 20 16. A vector comprising and capable of expressing, in a suitable host cell, the nucleic acid molecule of claim 14.
17. A host cell transformed with the nucleic acid molecule of claim 13.
- 25 18. A host cell transformed with the nucleic acid molecule of claim 14.
19. An antibody capable of specific binding to an I-TRAF polypeptide of claim 1.

20. A hybridoma cell line producing an antibody of claim 19.

21. A method of using a nucleic acid molecule of claim 13 comprising expressing such nucleic acid molecule in a cultured host cell transformed therewith, and recovering the polypeptide encoded by said nucleic acid molecule from the host cell.

22. A method of producing an I-TRAF polypeptide of claim 1 comprising inserting into the DNA of a cell containing nucleic acid encoding said polypeptide a transcription modulatory element in sufficient proximity and orientation to the nucleic acid molecule to influence the transcription thereof.

23. An assay for identifying a molecule capable of modulating the association of an I-TRAF and a TRAF comprising (a) incubating a mixture comprising said I-TRAF and TRAF with a candidate molecule and (b) detecting of the ability of the candidate molecule to modulate I-TRAF/TRAF association.

24. The assay of claim 23 wherein said candidate molecule prevents or inhibits the dissociation of an I-TRAF/TRAF complex.

25. The assay of claim 23 wherein said candidate molecule prevents the association of I-TRAF and TRAF.

26. The assay of claim 23 wherein said candidate molecule is a small molecule.

27. An assay for identifying a molecule the signal transduction of which is mediated by the association of a TRAF with a cellular protein, comprising (a) incubating a mixture comprising

said TRAF and an I-TRAF with a candidate molecule, and (b) detecting the ability of said candidate molecule to release TRAF from a complex formed with I-TRAF.

28. The assay of claim 27 wherein said mixture further comprises said cellular protein, and the ability of said candidate molecule to initiate TRAF-mediated signaling through said cellular protein is detected.

29. The assay of claim 23 or claim 28 wherein said TRAF comprises the TRAF domain of a native TRAF1, TRAF2 or TRAF3 polypeptide.

30. The assay of claim 23 or claim 28 wherein said TRAF, I-TRAF and cellular protein are human.

31. The assay of claim 30 wherein said TRAF comprises amino acids 264-501 of a native human TRAF2 polypeptide.

32. The assay of claim 30 wherein said I-TRAF comprises the N-terminal portion of a native human I-TRAF polypeptide.

33. The assay of claim 28 wherein said cellular protein is a member of the TNF receptor superfamily.

34. The assay of claim 33 wherein said cellular protein is selected from the group consisting of TNF-R2, CD40 and CD30.

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